

Title: Risk, Governance, and Readability: An Examination of Corporate Risk Discussions

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## Introduction

A company's acknowledgement of pertinent risk factors is important to the company and its stakeholders, so that both are aware of the present and future stability of the company. The purpose of this research is to determine how Fortune 100 companies view risk by analyzing what they state are important risks in their Securities and Exchange Commission (SEC) 10-K reports to investors. The purpose of this research is to understand how a company's own discussion of risk relates to corporate governance, concentration of shareholder ownership, the difficulty level (in terms of readability) of the document, how positive or negative the content is, and the objective financial risk measures for the firm.

## Method

Using text mining techniques (Feinerer (2014)) in *Revolution R*, we gathered, cleaned, sorted, tested, and interpreted the text of the Risk Factor section of the 10-Ks to understand how the companies discussed risk. This section was mandated in 2004 by the Sarbanes-Oxley Act. We also created indices of risk related words, used previously created sentiment lists (for tone), used data on corporate governance from RiskMetrics, and financial information from Wharton Research Data Services and Yahoo.com.

We sorted the data into major industrial sectors and cleaned it so we could calculate the percentage of risk, positive, and negative words in the documents, as well as the readability level, based on the Fleishman-Kincaid grade scale. We then estimated various regressions to assess the effect of our variables of interest on how the firms discussed risk.

## Tentative Results

In sum, we found that higher corporate governance scores are not related to the risk discussion, that the level of reading difficulty is related to the risk discussion, and that negative sentiment (tone) is related to the risk discussion. We also plan to add financial risk measures, such as stock returns and stock beta, to our analysis to see how these variables relate to the risk discussion.

## Conclusion

By assessing company risk by using its own words we can determine whether the company is communicating its risks effectively after controlling for the corporate governance, the documents tone (sentiment), its reading level, and financial condition.

## Bibliography

Feinerer, Ingo *Introduction to the tm Package Text Mining in R* (June 10, 2014) found at <http://cran.r-project.org/web/packages/tm/vignettes/tm.pdf> (February 11, 2015)